

Application No. 09/743,004
Amendment "D" dated December 14, 2005
Reply to Office Action mailed June 16, 2005

REMARKS

These remarks and the accompanying amendments are responsive to the non-final Office Action mailed June 16, 2005 (hereinafter referred to as the "Office Action"), having a shortened statutory period for reply that expired on September 16, 2005. A petition and fee for a three month extension of time accompanies this response, thereby extending the period for response until December 16, 2005.

The Office Action objected to Claims 3, 9, 10 and 12 due to several informalities. It is respectfully submitted that each of the noted informalities has been corrected in this response by amendment to each of these claims.

Sections 4-7 of the Office Action reject all of the claims under 35 U.S.C. 103(a) in each case using a combination of two of the following references: the reference authored by Watanabe cited in the Information Disclosure Statement submitted June 2, 2005 (hereinafter "Watanabe") in view of United States patent number 5,603,082 issued to Hamabe (hereinafter "Hamabe"), and United State patent number 5,530,910 issued to Taketsugu (hereinafter "Taketsugu").

Watanabe et al. discloses a method for allocating a spreading code to a base station in a CDMA system. According to this method, a plurality of neighboring base stations are grouped to allocate the same spreading code to base stations in the same group; and the spreading code is set such that a transmission phase of the spreading code varies depending upon the base station in the group. In order to implement the method of Watanabe, it is essential that the base stations in the group be in synchronization with each other. In contrast, the present invention can dispense with synchronization between the base stations. In a CDMA system in which base stations operate asynchronously, neighboring base stations must use individually different spreading codes. In order to facilitate identification of the spreading code in a mobile station, it

Application No. 09/743,004
Amendment "D" dated December 14, 2005
Reply to Office Action mailed June 16, 2005

is necessary to limit the number of types of spreading codes. However, when the number of types of spreading code is excessively reduced, base stations using the same spreading code are present adjacent to each other, so that interference therebetween becomes unavoidable. Accordingly, it is necessary to provide a sufficient number of types of spreading codes. However, when the spreading code is arbitrarily allocated to each base station (sector) without any rules, there arises a need to explore every possibility of identification of the spreading code when a mobile station searches a neighboring cell, so that the search for a neighboring cell requires much time and power. The present invention is directed to solving such problem with an asynchronous system, and accordingly, a background of the present invention is different from that of a synchronous system of Watanabe et al. Thus, the present invention is inventive over Watanabe.

Hamabe discloses a technique for allocating a communication channel (e.g. a channelization code in a WCDMA system) to each communication, based upon a geographical and directional relationship between a mobile station and a base station. In contrast, the present invention is directed to a technique for allocating a base-station (sector) identifier (e.g. a scrambling code in a WCDMA system) to each base station (sector). Thus, the present invention is totally different from Hamabe. Hamabe is directed to a technique for allocating a communication channel based upon a geographical and directional relationship between a mobile station and a base station, whereas the present invention is not directed to a technique for allocating a channel based upon a directional relationship. The present invention is directed to a technique for grouping sectors in neighboring base stations and the same base station to allocate base-station (sector) identifiers to the sectors. Thus, Hamabe nowhere suggests the technique of the present invention.

Application No. 09/743,004
Amendment "D" dated December 14, 2005
Reply to Office Action mailed June 16, 2005

Taketsugu discloses a concept such as URA_PCH in WCDMA which is different from that of the present invention. More specifically, Taketsugu discloses a technique for defining a plurality of location registration areas of which the sizes (the numbers of base stations covering the areas) are different from one another, thus switching to a location registration area to be used in accordance with the number of handovers, in order to reduce the number of controls of location registration accompanying the handovers. Thus, the invention of Taketsugu is different from the present invention which groups identifiers, and provides notification of a group number in order to search a neighboring cell. Thus, the present invention could not have been obvious from Taketsugu.

Therefore, the 35 U.S.C. 103(a) rejections should be withdrawn and favorable action is respectfully requested. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 15th day of December, 2005.

Respectfully submitted,



ADRIAN J. LEE
Registration No. 42,785
Attorney for Applicant
Customer No. 022913

ALL:ds
DS0000004464V001